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First record of a breeding colony of Masked Booby (*Sula dactylatra* Lesson, 1831; Sulidae) in the main island of the archipelago of Fernando de Noronha (Pernambuco, Brazil)

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ABSTRACT

*Fernando de Noronha Archipelago is one of the places with the highest richness of seabirds in Brazil; however, little information about the breeding biology of many species is available. Here we report a breeding colony of the Masked Booby (*Sula dactylatra*) in the main island of Fernando de Noronha, and present new data about the natural history and breeding biology of this species.*

Key-Words: *Sula dactylatra;* Fernando de Noronha; Oceanic islands; Suliformes.

Fernando de Noronha is located in the South Equatorial Atlantic (03°51'S; 32°24'W), and the archipelago belongs to Pernambuco State. The Fernando de Noronha archipelago is the top of a huge submarine mountain with its base located about 4.000 m below sea level. It covers an area of 26 km² distributed in 21 islands and islets. The larger of the islands, Fernando de Noronha, covers 17 km² and is the only inhabited (IBAMA, 1990; Silva, 2008; Castro, 2009).

Fernando de Noronha holds the greatest richness of seabirds in the Brazil, being an important area of breeding and feeding for at least 11 species of seabirds (Schulz-Neto, 2004; Silva, 2008). Most studies of birds at Fernando de Noronha were on the occurrence of species or general inventories (Oren, 1982, 1984; Nacinovic & Teixeira, 1989; Antas *et al.,* 1990; Antas, 1991; Schulz-Neto, 1995, 2004) and, despite the richness of seabirds found in the archipelago, little information is available about biology, ecology, movemtns and other aspects of the natural history for most of the species, even for the most common and abundant found there.

The Masked Booby (*Sula dactylatra* Lesson, 1831) is the largest species of booby, measuring about 90 cm long and with wingspan of more than 150 cm. They have yellow bills and yellow legs, which get more strongly colored during the breeding season. They are strictly marine and pelagic, preferring deeper areas in relation to other species of boobies (Sick, 1997; Silva & Campos, 2006). They nest on flat areas of undergrowth and the nests are simple open spaces in

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vegetation covered with excreta, eventually filled with small stones or shells (Schreiber & Hensley, 1976; Sick, 1997). Incubation lasts about 45 days and in about 120 days the chicks are flying. After this time, the young birds remain under the care of parents for about 150 days. Most adults persist in their breeding colony, but young and not reproductive adults disperse widely (Del Hoyo *et al.,* 1992; Sick, 1997). In Brazil, colonies of this species are found in Abrolhos, Atol das Rocas and Fernando de Noronha, breeding also on the island of Trindade, with occasional records in coastal areas from northeast to south of the Brazil (Del Hoyo *et al.,* 1992; Fonseca-Neto, 2004; Schulz-Neto, 2004; Silva & Campos, 2006; Hughes *et al.,* 2011).

The Masked Booby breeds only in the secondary islands of In Fernando de Noronha Archipelago. The main breeding colony is located on the Meio Island (300 nests). Other colonies were recorded in southwest of Rata Island (10 nests), Pontal da Macaxeira (200 nests) and Pontal Sul (10 nests), Ovos Island (70 nests) and Rasa Island (Antas *et al.,* 1990; Antas, 1991; Schulz-Neto, 2004; Silva, 2008). According to Antas (1991) due to human impacts, including the introduction of exotic predators, seabirds that breed on the main island would be only those that make their nests on trees or on cliffs, where access by predators would be more difficult. Thus, species of birds like the Masked Booby, which nests exclusively on the ground, would breed only in the secondary islands of the archipelago, where predator access would be more difficult (Antas, 1991).

However, there is a small, unrecorded breeding colony (Figure 1) located on the main island of Fernando de Noronha Archipelago, on the end of the Capim-açu trail (03°52'49.38"S; 32°27'29.47"W) (Figure 2). We found at lest six breeding pair in

FIGURE 1: Breeding colony of *Sula dactylatra* located at the end of the Capim-açu trail, main island of Fernando de Noronha archipelago, September 2015. Photo: Deborah Gutierrez, 2015.

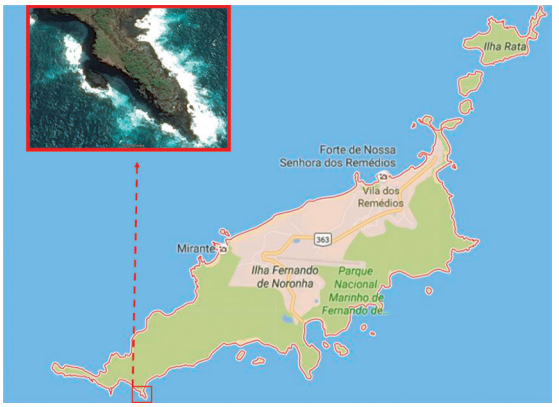

FIGURE 2: Map of Fernando de Noronha Archipelago, highlighting the location of the breeding colony of *Sula dactylatra,* located at the end of the Capim-açu trail (03°52'49.38"S; 32°27'29.47"W). Unscaled. Source: © 2016 google maps.

September 2015 and August 2016, thus representing a new breeding locality for this species. It is possible that this colony of the Masked Booby is a new occupation, once it had not been previously recorded by other researchers, despite being located near a trail of National Park. However, despite being a possible new nesting area, it is already threatened. Throughout the history of human occupation of the archipelago there were many types of anthropogenic pressures on birdlife, especially on the main island, and some of these problems caused by man persist until today, as in the case of the presence of introduced predators such as domestic cats *(Felis catus),* many already in feral state, brown rats *(Rattus norvegicus),* black rats *(Rattus rattus),* mice *(Mus musculus)* and lizards *(Salvator merianae)* (Soto, 2009). Currently these exotic species are found on the main island in alarming numbers and are considered potential predators of eggs, nestlings and even adults.

In September 2015, traces of *Felis catus* predation to *Sula dactylatra* nestlings in the Capim-açu colony were recorded, thus representing a real threat to the conservation of several migratory species, residents and even endemic birds. In this way, management actions and eradication of invaders species are urgent and essential for the conservation of this and other species of avifauna of the Fernando de Noronha Archipelago.

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